Abstract of the Disclosure

A quadrature oscillator with phase error correction including a local oscillator that generates a single-ended clock signal, a single-ended to differential converter that converts the clock signal to a differential clock signal, a quadrature generator that converts the differential clock signal into I and Q carrier signals, a phase error detector that measures a phase error between the I and Q carrier signals, and a feedback amplifier that modifies the differential clock signal based on measured phase error. The feedback amplifier applies the measured phase error as a DC offset to an AC differential clock signal. A transconductor converts the differential clock voltage signal into two pairs of differential current clock signals, where the quadrature generator generates I and Q current signal outputs from the two pairs of differential current clock signals. The phase error detector generates a phase error voltage, and the feedback amplifier includes a transconductance stage that converts phase error voltage into a DC correction current and that adds the correction current to each of the two pairs of AC differential current clock signals.